

Business Warehouse Reporting


BW Architecture

Washington State HRMS Business Warehouse (BW) Self-Paced Learning Materials

General Topics - BW End Users/Power Users

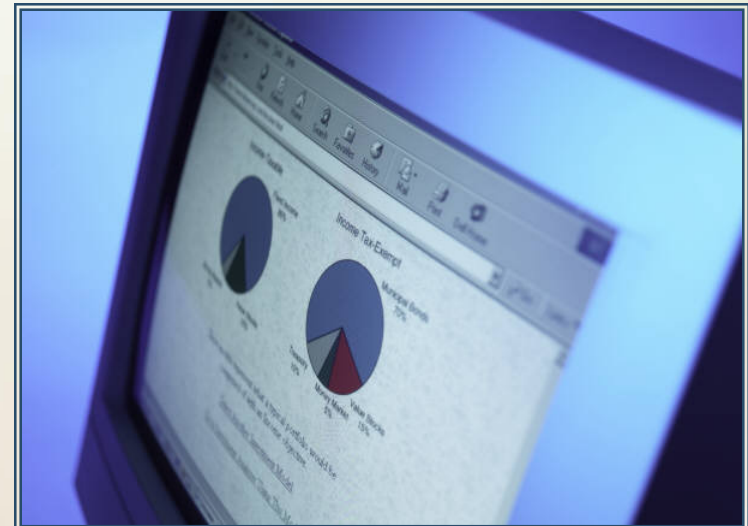
BW Architecture - Overview

The BW Architecture module provides an overview of the basic structure of the Business Warehouse (BW).

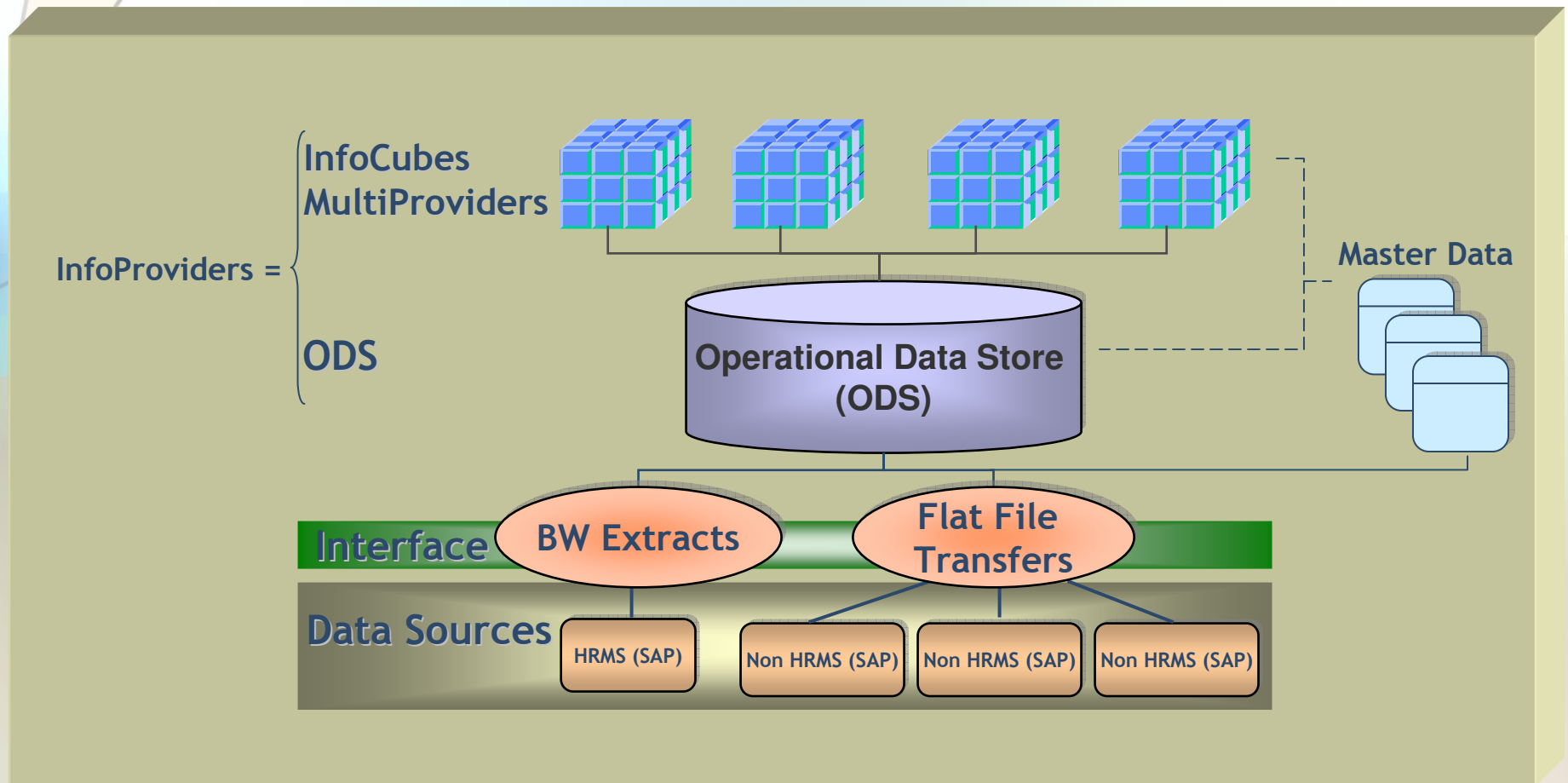
 Some topics cover advanced concepts and provide information for understanding data as it relates to the underlying BW structures.

Topics covered in this module include:

- BW Architecture
- BW InfoProviders
- BW InfoCube Conceptual Model
- BW Key Figures and Characteristics
- BW Master Data and InfoProviders
- BW Release 1 InfoProvider List
- BW Release 1 InfoProvider / Master Data Updates
- Schedule of BW Release 1 InfoProvider Updates
- Schedule of BW Release 1 Master Data Updates



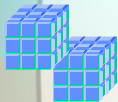
The following diagram provides a high level view of the architecture of the Business Warehouse and how data is retrieved and stored:



An InfoProvider is a data object used to create queries and reports. InfoCubes, MultiProviders and Operational Data Stores are types of InfoProviders.



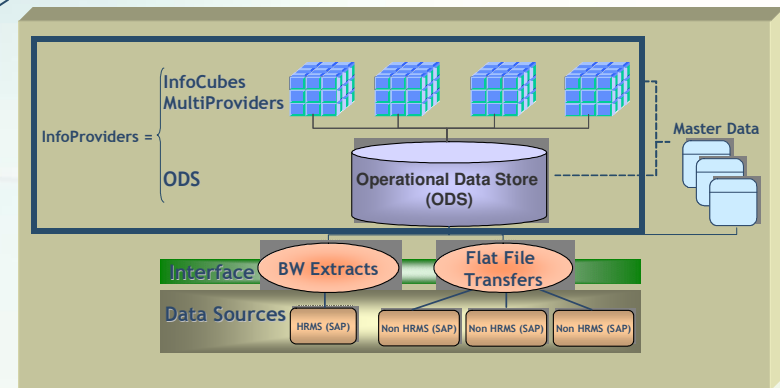
- **InfoCube** - data object containing multi-dimensional data. InfoCubes contain InfoObjects (data fields) such as Key Figures and Characteristics that can be used to build BW reports.



- **MultiProvider** - connects data from two or more InfoProviders. The MultiProvider is a view of the InfoProviders on which it is based.

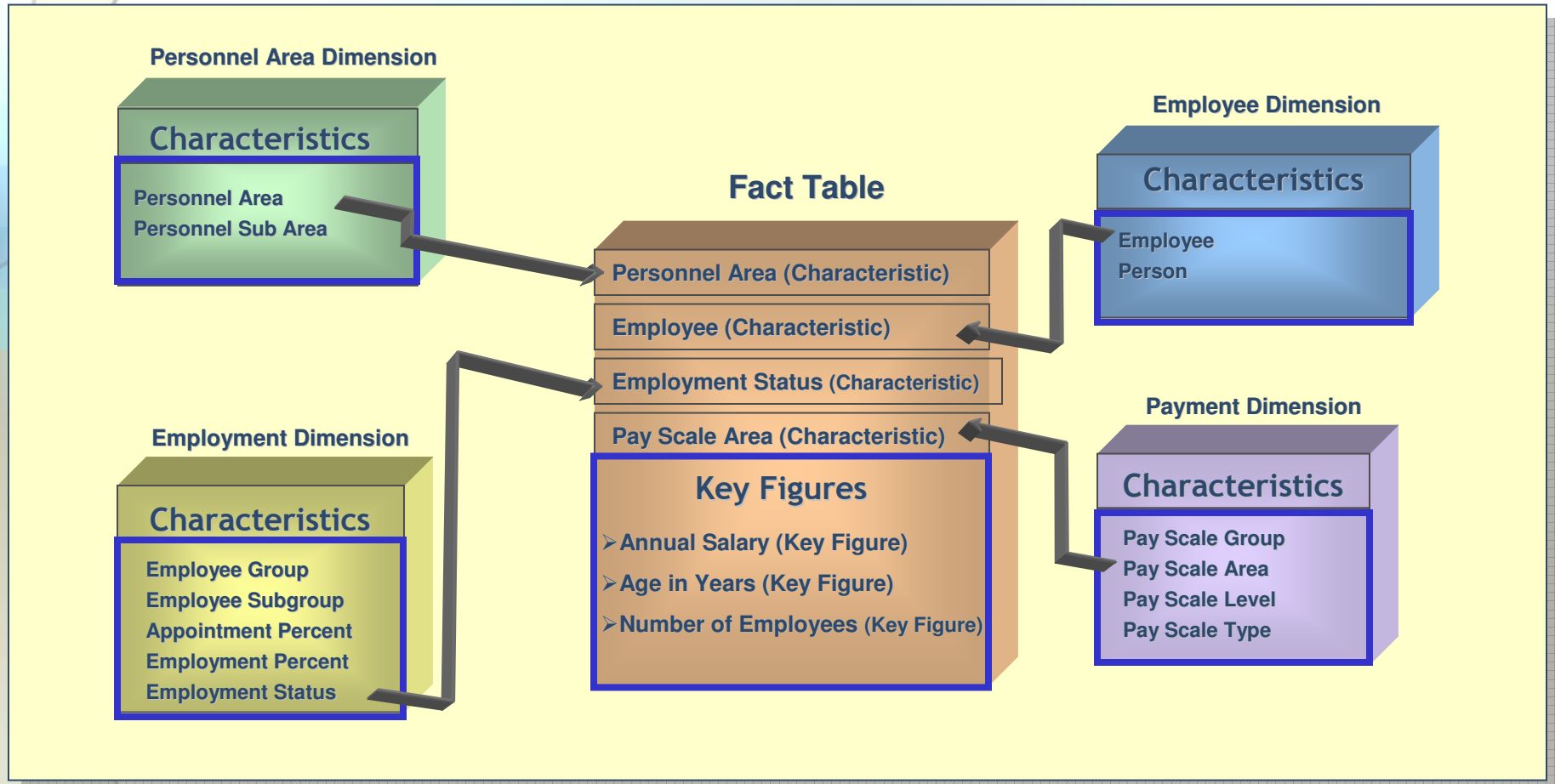


- **Operational Data Store (ODS)** - Operational data store stages data prior to it being loaded into an InfoCube. As opposed to the multi-dimensional design of InfoCubes, ODS objects are flat tables.



BW InfoCube Conceptual Model

The following illustration displays the elements of an InfoCube in the Business Warehouse. BW Release 1 reports have been developed using data from one or more InfoProviders, including InfoCubes and MultiProviders.



BW Key Figures and Characteristics

BW Reports are developed using data within InfoProviders that are comprised of:

- **Key Figures** - Numeric fields that are the object of analysis in BW reports, such as number of employees, number of positions, annual salary, etc. Key Figures quantify the Characteristics.
- **Characteristics** - Descriptive fields that provide context for the key figures in BW reports. Characteristics describe the Key Figures.

Example: Composition of an employee count report



Employee Count				
Personnel Area	Pay Scale Area		Employment Status	Number of Employees
Dept of Personnel	10/01	Standard Progression	Withdrawn	6
			Active	97
			Result	103
	Result			103
	Overall Result			

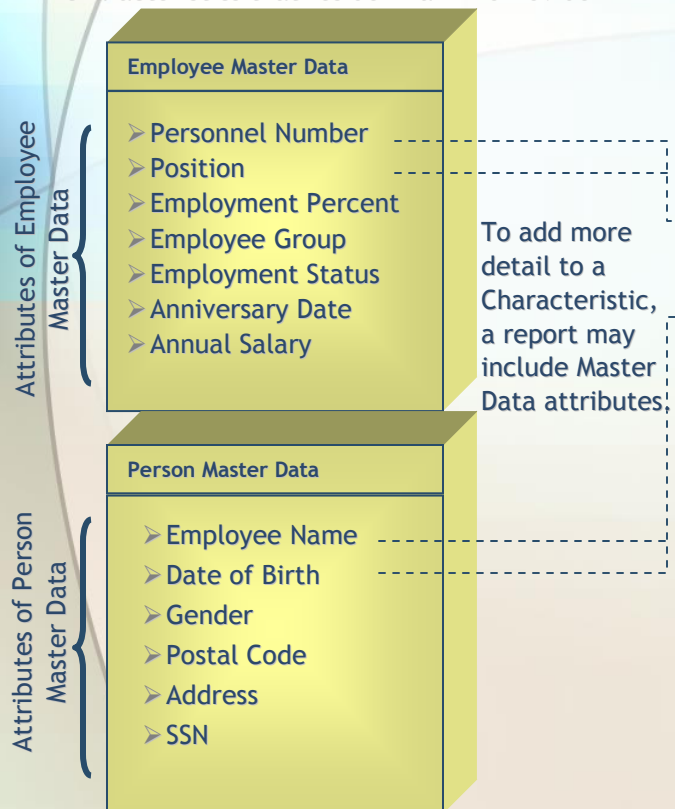
BW Report Results

BW Master Data and InfoProviders

The following illustration describes the Master Data and InfoProvider relationship as it relates to an InfoCube:

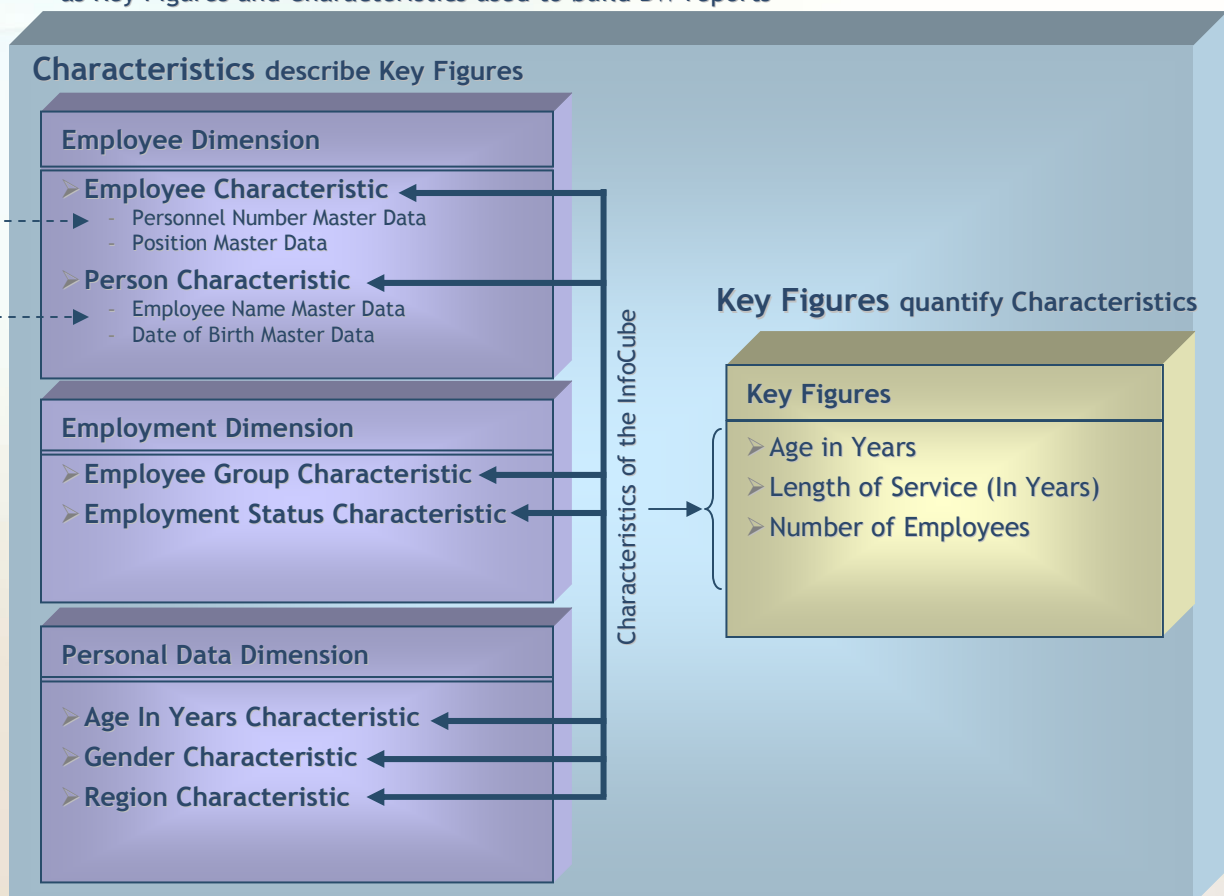
Master Data:

Data that provides more detail for Characteristics that reside in an InfoProvider



InfoCube:

Data object containing multi-dimensional data. Contains InfoObjects (data fields) such as Key Figures and Characteristics used to build BW reports

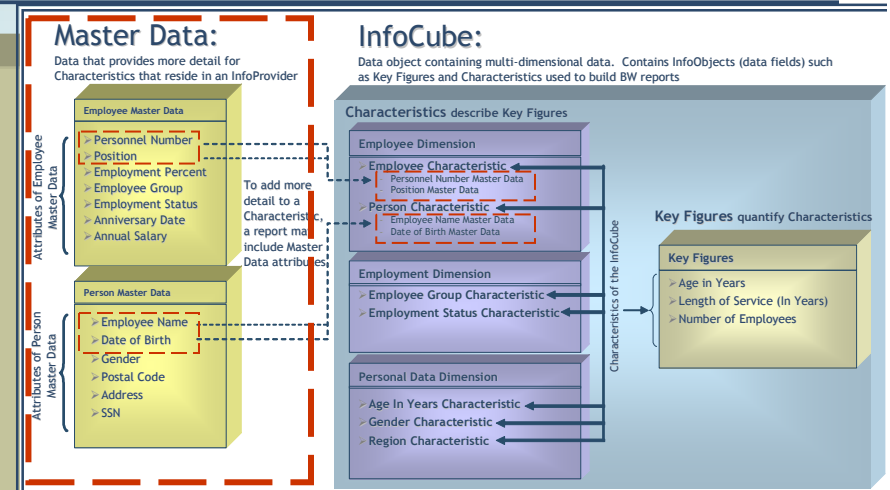


Continued...

BW Master Data and InfoProviders, Cont...

Master Data

- Master Data is data that provides more detail for Characteristics that reside in an InfoProvider. For example, *Personnel Number* and *Position* are Master Data that describe the *Employee* Characteristic. *Employee Name* and *Date of Birth* are Master Data that describe the *Person* Characteristic.
- **Master data typically remains unchanged over a long period of time** and is loaded and stored in Master Data tables, independent of InfoProviders.

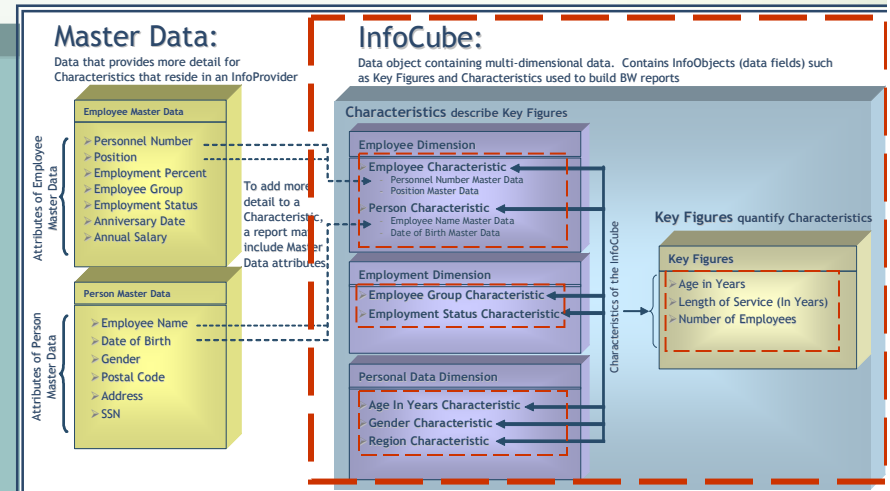


InfoProviders

- An InfoProvider can be an InfoCube, MultiProvider or ODS.
- InfoProviders consist of Key Figures and Characteristics.
 - **Characteristics** - exist in the InfoProviders and are objects that describe the Key Figures.
 - **Key Figures** - exist in the InfoProviders and are statistics and numbers that quantify characteristics.

For example, the Key Figure *Number of Employees* summarizes the Characteristic *Gender* the following way:

Females: 25,250 Employees
Males: 28,876 Employees



Note: Master Data and InfoProviders may have different update schedules. Refer to the *Schedule of BW InfoProvider/ Master Data Updates* section for more information.

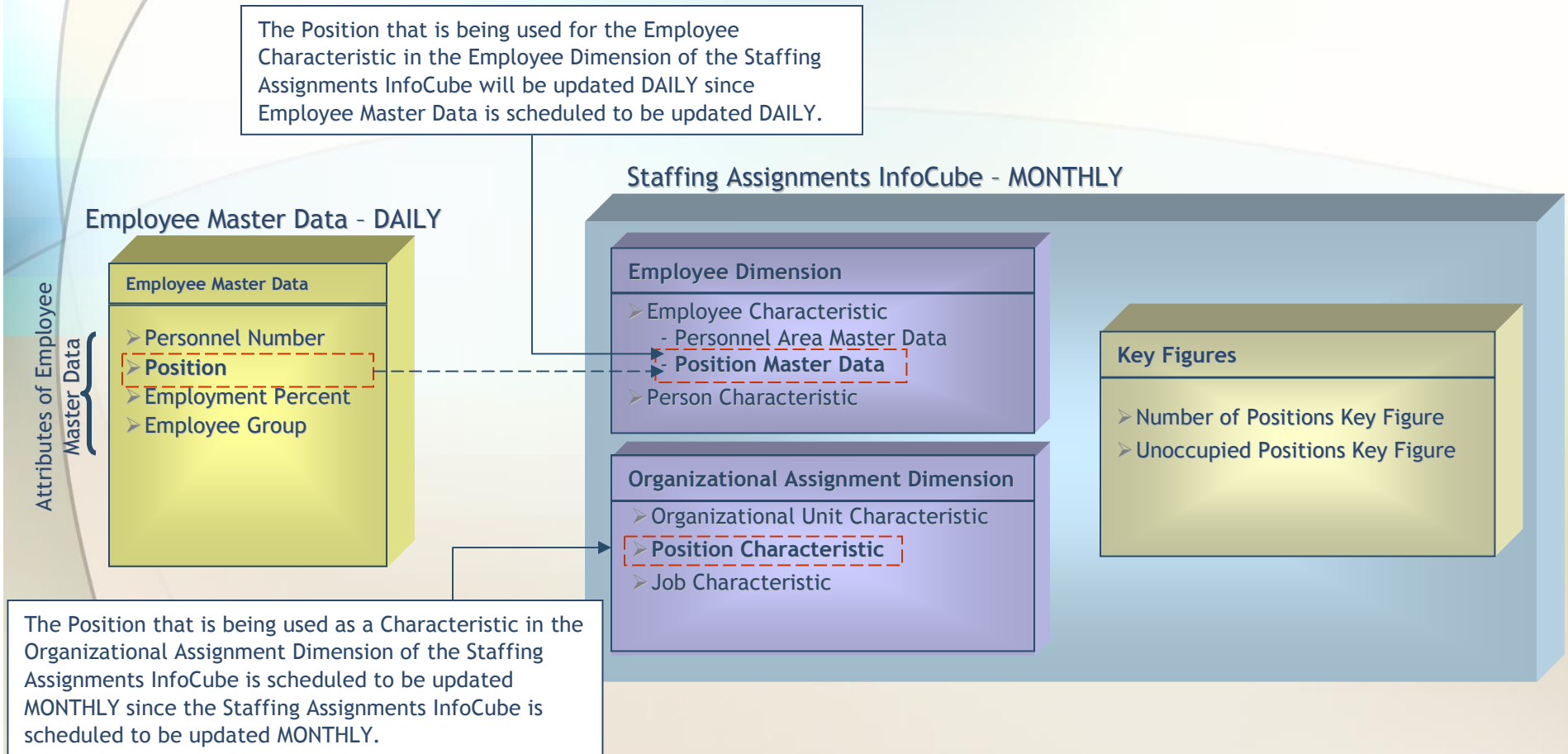
BW Release 1 InfoProvider List

The table below lists BW Release 1 InfoProviders with examples of how the InfoProvider might be used:

InfoProvider	InfoProvider Type	Example of Use
AFRS Payroll Accounting Data (ZPY_C51)	InfoCube	➤ Employee and Position level Payroll and Financial information provided by AFRS
Employee Specific Payroll Data (OPY_C02)	InfoCube	➤ Wage types by Personnel Area and/or Employee ➤ Employee count by Wage Type
Headcount (ZPAPA_C02)	InfoCube	➤ Summary level employee counts by demographic areas such as Gender, County Code, Employee Group, etc. Note: Use the Headcount and Personnel Actions InfoProvider for detail level employee counts by employee specific information such as Employee Name, Personnel ID, etc.
Headcount and Education (ZPA_M50)	MultiCube	➤ Number of records by Educational Establishment, Certificate and Education/Training ➤ Employee list by Educational Establishment, Certificate and Education/Training
Headcount and Personnel Actions (ZPA_C01)	InfoCube	➤ Summary level employee counts by demographic areas such as Gender, County Code, Employee Group, etc. ➤ Detail level employee counts by employee specific information such as Employee Name, Personnel ID, etc. ➤ Employee count by personnel Action Type or Action Reason ➤ Employee list by personnel Action Type or Action Reason
Quota Data (ZPT_C51)	InfoCube	➤ Quota accrual and balances by Personnel Area and/or Employee
Staffing Assignments (ZPAOS_C01)	InfoCube	➤ Position count by Organizational Unit and/or Job Class ➤ Position list by Organizational Unit and/or Job Class
Time and Labor (OPT_C01)	InfoCube	➤ Time balances and accruals by Personnel Area and/or Employee

BW Release 1 InfoProvider/Master Data Updates

While an InfoProvider may be updated monthly, Master Data that is being referenced in the InfoProvider may be updated daily. The following illustration provides an example of different update frequencies for InfoProviders and Master Data, using the Staffing Assignments InfoCube as an example.



Schedule of BW Release 1 InfoProvider Updates

The following table provides an overview of the data load frequency for BW Release 1 InfoProviders:

InfoProvider	Update Frequency	Data Load Schedule
AFRS Payroll Accounting Data (ZPY_C51)	Daily (note: AFRS Payroll Accounting Transactional Data will be updated when an adjustment has been made and a new AFRS file is available. If no adjustments have occurred, AFRS Payroll Accounting Transactional Data will be updated after the next payroll exit)	Daily
Headcount (ZPAPA_C02)	Daily	Daily
Headcount and Personnel Actions (ZPA_C01)	Daily	Daily
Employee Specific Payroll Data (OPY_C02)	Semi-Monthly	After Payroll Exit
Quota Data (ZPT_C51)	Semi-Monthly	After Payroll Exit
Time and Labor (OPT_C01)	Semi-Monthly	After Payroll Exit
Headcount and Education (ZPA_M50)	Monthly	1 st Friday/mo*
Staffing Assignments (ZPAOS_C01)	Monthly	1 st Friday/mo*




Note: BW data loads are on an automated schedule. Loads occur between 6pm and 6am.

*In the months that HRMS Payroll processing is scheduled to occur over the first Friday of the month, the BW load will be rescheduled. Usually for the second Friday of the month.

Schedule of BW Release 1 Master Data Updates

The following table provides an overview of the data load frequency for BW Release 1 most commonly used Master Data.

Master Data	Update Frequency	Data Load Schedule
Employee	Daily	Daily
Person	Daily	Daily
Company Code	Monthly	1 st Friday/mo*
Contract Type	Monthly	1 st Friday/mo*
Job	Monthly	1 st Friday/mo*
Org Unit	Monthly	1 st Friday/mo*
Pay Grade Level	Monthly	1 st Friday/mo*
Pay Grade Level To	Monthly	1 st Friday/mo*
Pay Scale	Monthly	1 st Friday/mo*
Pay Scale Level	Monthly	1 st Friday/mo*
Pay Scale Level To	Monthly	1 st Friday/mo*
Position	Monthly	1 st Friday/mo*

 Note: BW data loads are on an automated schedule. Loads occur between 6pm and 6am.
*In the months that HRMS Payroll processing is scheduled to occur over the first Friday of the month, the BW load will be rescheduled. Usually for the second Friday of the month.